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Exelon Nuclear

July 16, 2001

10 CFR 50.73

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

LaSalle County Station, Unit 2
Facility Operating License No. NPF-18
NRC Docket No. 50-374

Subject: Licensee Event Report

In accordance with 10 CFR 50.73(a)(2)(iv)(A), Exelon Generation Company, (EGC), LLC, is submitting Licensee Event Report Number 01-002-00, Docket No. 050-374.

Should you have any questions concerning this letter, please contact Mr. William Riffer, Regulatory Assurance Manager, at (815) 415-2800.

Respectfully,

for Mark A. Schiavoni
Plant Manager
LaSalle County Station

Attachment: Licensee Event Report

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - LaSalle County Station

IE22

NRC FORM 366 (1-2001) | U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 | EXPIRES 6-30-2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and by internet e:mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NOEB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
LaSalle County Station, Unit 2	05000374	1 of 3

TITLE (4) Reactor Scram due to High Turbine Vibration During Testing

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
05	27	01	01	- 002 -	00	07	16	01	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1
POWER LEVEL (10)	80

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)

☐ 20.2201(b)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2201(d)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(1)	☐ 50.36(c)(1)(i)(A)	☒ 50.73(a)(2)(iv)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(I)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ OTHER
☐ 20.2203(a)(2)(iii)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC From 366A
☐ 20.2203(a)(2)(iv)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	
☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(viii)(A)	
☐ 20.2203(a)(3)(I)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(B)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
George Wilhelmsen	(815) 415-2111

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	[redacted]	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
[redacted] YES (If yes, complete EXPECTED SUBMISSION DATE)	☒ NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines)(16)

At 0618 hours on May 27, 2001, LaSalle County Station, Unit 2 automatically scrammed from 80 percent power. The automatic reactor scram occurred during main turbine control valve (TCV) testing.

The root cause of this event was Electrohydraulic Control fluid contamination of a connector for TCV #3 in combination with higher than normal baseline vibration during TCV testing. The contamination resulted in an incorrect TCV #3 position indication which caused TCV #3 to be mispositioned and the remaining TCVs to open further than usual to maintain pressure. When TCV #1 was closed for testing, the combination of the abnormal position of the remaining control valves and an existing main turbine "A" coupling misalignment created an unbalanced load across the high pressure turbine. This resulted in increased vibration, which reached the trip setpoint for the turbine. The corrective action to prevent recurrence included cleaning and replacement of the seal of the fouled connector during the forced outage.

The safety consequences of this event were minimal. The turbine generator trip is described as an event of moderate frequency in Chapter 15 of the Updated Final Safety Analysis Report (UFSAR). The plant response was consistent with the referenced UFSAR chapter.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
LaSalle County Station, Unit 2	05000374	01	- 002 -	00	2 of 3

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

PLANT AND SYSTEM Identification

General Electric - Boiling Water Reactor, 3489 Megawatts Thermal Rated Core Power

A. CONDITION PRIOR TO EVENT

Unit(s): 2 Event Date: 05/27/01 Event Time: 0618 Hours
Reactor Mode(s): 1 Power Level(s): 80
Mode(s) Name: Run

B. DESCRIPTION OF EVENT

On May 27, 2001, Unit 2 was operating at 80 percent reactor power. Procedure LOS-RP-M5, "Turbine Control Valve Monthly Surveillance," was in progress to test the main turbine control valves (TCV) [TA]. During the performance of LOS-RP-M5 on TCV #1 , an automatic reactor scram occurred at 0618 hours due to turbine stop valve closure which was caused by high vibration on the main turbine with reactor power above 25 percent power. Vibration on turbine bearing #1 exceeded the main turbine trip set point of 12 mils for greater than three seconds.

All systems operated as designed, and there were no ECCS actuations. The lowest reactor water level reached was minus 10 inches, after which level recovered to the normal band. Reactor pressure responded normally. No safety relief valves actuated. All control rods fully inserted.

This event is reportable pursuant to 10CFR50.73(a)(2)(iv)(A) as an event that resulted in an automatic actuation of the reactor protection system. An Emergency Notification System call was made at 0740 hours on May 27, 2001.

C. CAUSE OF EVENT

The root cause of this event was that a connector on the linear variable differential transformer (LVDT) for TCV #3 was contaminated with Electrohydraulic Control (EHC)[JJ] fluid in combination with higher than normal baseline vibration during TCV testing. This resulted in a high resistance connection, which produced an incorrect position indication on TCV #3. This resulted in a feedback signal, which throttled flow through the TCV #3 compared to the remaining TCVs. As a result of this feedback, the remaining TCVs opened further to maintain pressure.

The closure of TCV #1 for testing in combination with the abnormal position of the remaining control valves created an unbalanced steam load across the high pressure turbine. This change in steam flow unloaded the #1 and #2 high pressure turbine bearings, and resulted in increased vibration, which reached the trip setpoint of 12 mils for greater than three seconds.

Contributing to this event was a less than optimal alignment of the main turbine "A" coupling. This misalignment was recognized during the last refueling outage but was evaluated as acceptable for continued operation. This misalignment could not cause a high vibration trip individually. However, this increased base load vibration during TCV testing in combination with the problem on TCV #3, contributed to the transient high vibrations that caused the trip.

D. SAFETY ANALYSIS

The safety consequences of this event were minimal. The turbine generator trip is described as an event of moderate frequency in Chapter 15 of the Updated Final Safety Analysis Report (UFSAR). The plant responded consistent with the referenced UFSAR chapter, taking into account the lower power level which mitigated some of the assumed transient responses (e.g., SRV lifting, loss of feedwater, and RCIC/HPCS initiation). The reactor was safely shut down and recovery performed without incident. There were no safety system functional failures. This event would have been more severe at full power. The power level was reduced for the performance of the turbine control valve testing.

E. CORRECTIVE ACTIONS

1. Unit 2 main turbine "A" coupling will be aligned to within GE Specifications in L2R09. (ATM# 52841)

2. LOS-RP-M5 will be revised to bypass the high vibration trips on Turbine Bearings #1 and #2 during TCV testing. (ATM# 52841)

Corrective Action to Prevent Recurrence:

1. The fouled TCV connector was cleaned and the seal replaced during the forced outage. (complete)

2. The remaining TCV connector seals in Unit 1 and 2 will be replaced in future outages. (ATM# 52841)

F. PREVIOUS OCCURRENCES

A review of Licensee Event Reports over the previous five years found no previous or similar occurrences.

G. COMPONENT FAILURE DATA

Since no component failure occurred, this section is not applicable.